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Overcoming the monetization challenge in freemium online games

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Abstract

Purpose - Online games based on a freemium business model face the monetization challenge. The purpose of this research is to examine how players' achievement orientation, social orientation and sense of community contribute to willingness to pay (WtP).

Design/methodology/approach - A multi-method study of an online game community is used. Interviews and participant observation are used to develop an understanding of social and achievement orientations followed by the development of hypotheses that are tested using survey data.

Findings - The findings indicate that a sense of community is positively related with WtP, whereas satisfaction or dissatisfaction with the service provider is not. We examine the moderating role of players' achievement orientation and social orientation and find that while a stronger connection to the online game community may encourage achievement-oriented players to pay, the opposite is indicated for socially-oriented players.

Practical implications – Decision makers need to understand that not all players are potential payers; while socially-oriented users can help to maintain and grow the community, achievement-oriented players are more likely to pay for the value they extract from the community.

Originality/value - While communities are held together by people with common interests, which intuitively suggests that WtP increases with the strength of connection to the community, we find this only applies in the case of players with an achievement orientation. For those with a social orientation, WtP may actually decrease as their connection to the online game community increases. These perhaps counter-intuitive findings constitute a novel contribution of value for both theory and practice.

Key words: Monetization, Online games, Achievement Orientation, Social Orientation, Community, Mixed Methods.

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Introduction

In online communities, particularly online game communities, value is not created by businesses, but is instead co-created in interactive, multi-directional exchanges among users (Kuppelwieser et al., 2013; Oestreicher-Singer and Zalmanson, 2013). Indeed, the service providers' role is often simply to provide the platform for such exchanges to take place. Some users pay for online games, while others make non-monetary contributions. They provide content, offer services, and generate network effects by creating a community for others to interact with. Service providers must therefore adapt to a power shift in users' favour. While marketing research has focused on brand communities, where community loyalty and Willingness to Pay (WtP) are mutually reinforcing (Schau, et al., 2009; Algesheimer, et al., 2010), the issue of why (some) people pay for online games remains challenging. Getting online game players to both contribute to a healthy community and make sufficient monetary contributions to sustain the service is referred to as *the monetization challenge*.

The monetization challenge is particularly germane against the backdrop of the ubiquity of *freemium* business models, which offer free but restricted access to services with the option to remove restrictions through payment of one-off fees or subscriptions (Anderson, 2009). Free access stimulates demand, even though only a small proportion of users typically go from free to fee paying. Conversion rates of 10% are considered high (Lovell, 2011), but nevertheless may generate insufficient revenue to sustain the service provider. While increasing WtP in order to increase conversion rates is appealing, online games are also faced with the challenge of creating a critical mass of (free or paying) users. Their interactions create network effects, without which an online game has less value (Lin and Lu, 2011). Thus, the monetization challenge is twofold: critical mass and conversion. To generate critical mass, service providers need to support a

sufficiently motivated community of users to contribute non-monetary value including content and participation (Kuppelwieser et al., 2013, Anderl et al., 2016). To ensure conversion, they must ensure a sufficient number of community members also feel motivated to make monetary contributions (Pauwels and Weiss, 2008). In freemium online games, not all players are payers, but both groups are essential to the survival of the community.

Participation in online games is motivated by achievement or social motives; either a match between challenge and skills or by interdependence with other players (Huang et al., 2017). Yet, little is known about how these motivations influence WtP and research in the context of online games is limited (Hofacker, et al., 2016).

By investigating the drivers of WtP in an online game based on a freemium model we highlight the combined effects of community and player type on WtP. This helps to overcome gaps in the literature in relation to WtP in online game communities. This research makes three important contributions to knowledge. Firstly, while communities are held together by people with common interests, which would suggest WtP increases with an individual's connection to community, we find evidence of this effect only for users with an achievement orientation. For those with a social orientation, WtP may even decrease as their connection to the community increases. Service providers must therefore use different incentives to encourage monetary and non-monetary contributions from these different categories of users. Secondly, we observe that the actions of the service provider have at best a neutral effect on WtP. Users expect access to the community to be provided, but most of the value in their experience stems from interactions with other users. Service providers should therefore support these communities, while minimising disruption to their experience. Finally, a distinction is found between community membership and social orientation. Achievement-oriented users are not necessarily anti-social,

but their connection to fellow community members may be viewed in terms of reciprocal exchanges rather than general social capital. Our research clearly shows that player motivation, in combination with sense of community can be a crucial influence on WtP.

Theoretical background

We draw on theory related to online communities, games and player types, social capital, social exchange, motivation and WtP. A summary of literature that informs the research is presented in table 1.

(Online) Communities

The concept of community has been the subject of academic enquiry for many years. A sense of community is a perceptual construct that depends on a feeling of belonging, influence, emotional connection and fulfilment of needs (McMillan and Chavis, 1986). Muniz and O'Guinn (2001) propose three characteristics to describe the nature of communities, namely consciousness of kind, shared traditions and values, and moral responsibility. For a community to exist, its members must view themselves as similar and share social norms that establish a shared identity, while excluding non-members (Beltagui and Schmidt, 2017). They also take responsibility for the survival and growth of their community.

The internet has facilitated the creation of geographically dispersed, virtual communities. Following Dholakia, et al. (2004), and consistent with Rheingold (1993), online game communities can be defined as groups of varying size that congregate and interact within an online game for the sake of achieving both personal and shared goals.

Table 1 – A summary of key studies on community participation, player motivation and outcomes

Author	Year	Focus	Methods	Summary
McMillan & Chavis	1986	Sense of Community	Literature review and theoretical framework.	Finds sense of community depends on a feeling of belonging, having influence, emotional connection, and fulfilment of needs
Rheingold	1993	Virtual Communities	First-hand studies of virtual communities visited by the author.	Highlights the emergence of online interactions and argues that virtual communities share most of the same characteristics of physical communities, in electronic form.
Bartle	1996	Player categories in multi-user games	Development of theoretical framework based on observation of player interaction.	Players can be categorised as Socialisers, Explorers, Achievers and Killers, according to their levels of acting/interacting with players or the game world.
Muniz & O'Guinn	2001	Brand Communities	Ethnographic study of communities that share interest in particular brands.	Communities are defined by members consciousness of similarity, shared traditions and moral responsibility to maintain the community.
Mathwick	2002	Online consumers	Survey of consumers online, analysing relation between online interaction and loyalty.	Consumers categorized as transactional community member, socializer, personal connector and lurker. Community-building infrastructure, including chat rooms or other interaction opportunities, are positively associated with loyalty of online consumers.
Adler & Kwon	2002	Social Capital	Literature review of social science research on social capital.	Social capital is a measure of the goodwill between individuals in a community, which gives these individuals a range of benefits when appropriated in other contexts.
Shampanier et al.	2007	Value of "free" products	Field experiments evaluating students' perceptions and behavior in response to free products.	People may perceive the benefits of zero cost products to be higher than those with a price. Where a free option is available alongside others, dramatically more people chose it over more expensive options.
Pauwels & Weiss	2008	Moving from to fee paying business model	Time-series analysis of user numbers and conversion in online marketing content provider.	Payment walls slows down user profile creation and slows down growth momentum.
Füller	2008	Brand community members as a source of innovation	Survey of online brand community, testing hypotheses related to personality, motivation and participation.	Identification with brand community, as well as extraversion and openness are among identified determinants of participation in innovation activity.
Nambisan & Baron	2010	Customer contributions in virtual customer environments	Survey of online community members, testing hypotheses related to social capital, social exchange and social identity.	Community members who feel more closely connected to the company may contribute product ideas, whereas those who perceive a connection to community may support fellow members.

Author	Year	Focus	Methods	Summary
Algesheimer et al.	2010	Motivation-social	Field experiment involving users of eBay Germany, testing hypotheses related to community participation and commercial behaviour.	Increased community participation did not translate into increased spending behaviour, rather community participants are seen to be more selective and efficient sellers or conservative spenders.
Tseng	2011	Online gamer motivation	Survey of Taiwanese online games players, identifying player types and spending patterns.	Online players can be clustered into aggressive, social, and inactive gamers. Aggressive players are found to be more willing to pay to play freemium games.
Roberts et al.	2014	Consumer motivations towards co-creation	Online interviews with participants involved in video games, focusing on consumer motivations to co-create.	Consumers' egocentric, altruistic and goal oriented motivations can be related to their willingness and contributions to innovation.
Fernandes & Remelhe	2016	Customers' motivations for collaborative innovation	Survey research testing hypotheses related to motivation and willingness to engage in collaborative innovation.	Results suggest that intrinsic motivation, knowledge acquisition and social interaction may be related to collaboration activity, but extrinsic rewards
Beltagui & Schmidt	2017	Online social games community and social cohesion	Ethnographic study of players in a Danish social casual games community.	Sub communities of players build their own culture, which helps them maintain trust and close relationships, but also excludes those perceived to be outsiders.
Cruz et al.	2017	Perception of game reward systems and achievement motivation	Focus group study of students who play video games, examining achievement motivation and game "badge" reward system.	In-game rewards, such as badges to signal achievements, can increase motivation of some individuals to play and complete games.
Roberts et al.	2017	Social network site users' motivations to contribute to new product launch	Survey research testing hypotheses about user motivations to contribute to new product launch.	People who spend time on social network sites to be challenged, to escape or connect with others are more likely to notice advertisements. People who are motivated by the pursuit of information, be challenged or connect with others are more likely to review products.

Motivation

Understanding what motivates virtual community members and drives behaviours is seen as vital (Roberts, et al., 2017), in order to understand and influence activities such as co-creation (Candi, et al., 2018; Marion, et al., 2016) and WtP. Mathwick (2002) divides behaviours into exchange-oriented and communally-oriented social norms. These categories overlap strongly with Bartle's (1996) taxonomy of gamer motivations in virtual communities, namely achievement orientation and social orientation.

Achievement orientation

Exchange-oriented relational norms describe behaviours that are based on assumed reciprocity and underpinned by social capital and social exchange (Roberts, et al., 2014; Nambisan and Baron, 2010). "Social capital represents the ability of actors to secure benefits by virtue of membership in a social network or other social structure" (Inkpen and Tsang, 2005, p.150), such as an online games community. Positive actions by players towards the community help to strengthen an individual's connection to others, building social capital, with an expectation of future benefits (Adler and Kwon, 2002). Benefits can include opportunities for reputation enhancement. In a similar vein, social exchange theory suggests that individuals have expectations of private rewards for contribution. Social exchange theory proposes that individuals engage in a process of cost-benefit evaluation (Vivek, et al., 2002). The benefits they derive may be intrinsic, such as learning or enjoyment, or extrinsic, including recognition and standing within the community (Füller, 2010; Nambisan and Baron, 2010). In online games, standing within the community is typically measured by a scoring system that displays achievement (Cruz, et al., 2017). Tseng's (2011) findings suggest those most eager to win, and

who take pleasure in defeating others, pay more to play and to help them win. Thus, we can expect that players most concerned with achievement have higher WtP for freemium games.

Social Orientation

According to Bartle (1996, p.3) online game players with a social orientation, "use the game's communicative facilities, and apply the role-playing that these engender, as a context in which to converse (and otherwise interact) with other players." Thus, in contrast to players with an achievement orientation, players with a social orientation may view paying for bonuses or to advance faster in a game to be unfair because it subverts the basis of games that rely on skill and effort (Lin and Sun, 2011). Many people feel that all internet content should be free, and that users should be motivated by collective goals, not individual or commercial goals (Fernandez and Remelhe, 2016; Pauwels and Weiss, 2008). Mathwick (2002) argues that community members often feel like part of a family and value social capital in the form of strong social ties, without expected reciprocity. Participation in a community is driven by an individual's sense of duty and relationship with other community members (Nambisan and Baron ,2010; Lakhani and von Hippel ,2003). Furthermore, a person's identification with a community—their social identity (Stryker and Burke, 2000)—helps to shape their behaviours and participation within that group. Hence socially-oriented players engage in communities to gain a sense of belonging and may be offended by monetary requests that change the nature of their involvement from social to economic (Shampanier et al., 2007). This may help to explain why involvement in communities is not always associated with increased WtP (Algesheimer et al., 2010).

Research question and research strategy

The question addressed by this research is *how is willingness to pay related to users' achievement and social orientations in online game communities?* To examine this question we

adopt a multi-method approach starting with an in-depth case study followed by a quantitative survey-based study. Case studies are of particular value where the theory base is weak and for investigating a contemporary phenomenon, such as monetization, within a real-life context (Yin, 1994). They allow for multiple sources of evidence and use of a combination of research methods, providing a basis for triangulation and improving the validity of the findings.

This approach is useful for research that seeks to both generate and test hypotheses (Dubois and Gadde, 2002). In this case, while there is some theoretical support for the distinction between achievement orientation and social orientation, these are not well established in the literature and their relation to WtP in online communities is not well understood. Hence, we use qualitative analysis to inductively discover how these orientations are enacted in practice and propose how their differences may influence WtP.

Qualitative research addresses questions about how social experience is created and given meaning and is useful when variables are not well established (Denzin and Lincoln, 2005; Cresswell, 1994). Online game communities are complex contexts that must be untangled by researchers (Pearce, 2009). We use an ethnographic approach for such untangling, through participant observation of online and offline interactions in their natural settings (Kozinets, 2002). Subsequently, we use quantitative methods using survey data to test hypotheses generated from the qualitative findings. Both studies focus on the same online game community, allowing us to both build and test theory using complementary methods. Figure 1 provides an overview of the research methodology.

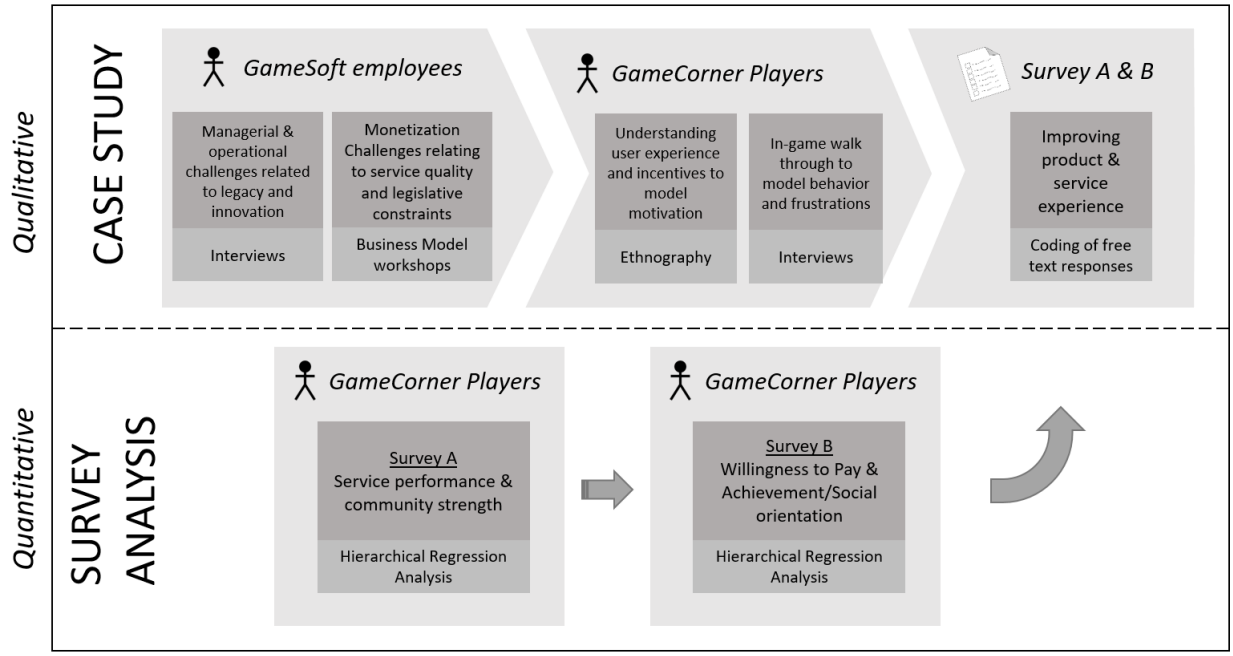

Figure 1: Overview of activities undertaken in a multi-method approach to investigate how willingness to pay is related to online game users' achievement and social orientation.

Empirical context

For the purpose of this research, we selected a Danish online game community referred to by the pseudonym *GameCorner*. This is a suitable context for three reasons. Firstly, it provided a community that had survived over a decade, giving a unique opportunity to investigate the influence of community. Secondly, the service provider, a small software firm we refer to as *GameSoft*, was facing pressure to monetize its games, which motivated them to support the research and provide access to users. Thirdly, conflict among users made it clear that differing motivations would be present and hence understanding the respective influence of the games and community would be vital in overcoming the monetization challenge.

GameCorner offers a range of traditional board, dice and card games and is thus classed as offering *casual games*. Casual games blend competition and social interaction, creating user experiences based on both competition and relationships with other players (McGloin, et al.,

2016). Those who play casual games generally prefer social and thinking games, in contrast with "hardcore" gamers, who favour sports and shooter games (Manero, et al., 2016). Casual games facilitate both achievement and social interactions, are increasingly popular and are heavily reliant on the freemium business model. This makes the monetization challenge of particular relevance in this context.

GameCorner's user interface is designed around a metaphor involving game rooms and tables, so that users can see who is playing, and how many places are available at each table. The games are accompanied by chat facilities, allowing users to converse while watching or playing games. In over 10 years, a vibrant community has been created in which players chat, play games, and exchange virtual gifts. Additional features are available to fee-paying *VIP players*. These include social features such as the ability to customize a personal profile page and send messages to other players as well as the ability to participate in community-organized tournaments for non-monetary prizes and achievements. In all games, rating points are awarded for wins, and are displayed alongside each player's profile to reflect their skill level. The individual traits of each game attract different players, so that sub-communities have gradually emerged around each one. Each game specific sub-community is managed by a game administrator. These are seasoned players who voluntarily commit to monitoring in-game behaviour as well as organising online and offline events for community members.

Study 1: Exploring social and achievement orientations

Research Methodology

Study 1 was conducted over an 18-month period of fieldwork investigating both GameSoft employees and GameCorner community members. This entailed three distinct activities.

First, semi-structured interviews and business model workshops were conducted with GameSoft employees to gain an understanding of the managerial and operational challenges at play and to identify the nature and impact of the monetization challenge.

Second, the focus turned to understanding the community, including players and their motivations, using online and offline ethnographic methods. Researchers sought to understand the user experience by participating as players in the community and attending an offline game-day organised by GameSoft users. There were between 40 and 50 users at the event and observing and speaking informally with users allowed insights such as their tendency to use screen-names rather than real names, indicating their connection to the community. In some cases somewhat more formal interviews and walkthroughs using the *think aloud* approach from user-interface design (Rogers, et al., 2011) were employed to gain additional insights.

Third, anonymous free text comments extracted from a survey of 245 GameCorner players asking how their experience could be improved, were analysed. A coding framework (Miles and Huberman, 1994) was generated to categorise achievement-oriented and socially-oriented users and allowed themes to be inductively identified through comparison of these two groups. This exercise was jointly conducted by two researchers, who discussed the categorisation and analysis as a means of checking the reliability of the interpretations. A summary is presented in table 2, with illustrative examples of themes and quotes. All direct quotes were translated from Danish

by two researchers whose first languages are Danish and English respectively. Interpretations and analysis were supported by field notes and ethnographic research.

Table 2 – Comparison of social orientation and achievement orientation in the GameCorner player community.

Social orientation examples	Achievement orientation examples	Summary of findings
		Willingness/unwillingness to pay
"I'm only playing for the sake of fun and will not pay to socialize in a couple of games, especially when you advertise free games."	*"[I expect] proper playing conditions, proper rules, cool prizes - the prizes are too small...and I do not want to pay anymore for the poor service."* *"I don't want to pay anymore because the rating points from quitters do not get distributed to remaining players"*	Socially oriented players are concerned with maintaining relationships and playing for fun. They do not necessarily feel it is appropriate to pay for this. Achievement oriented players are concerned with the challenge offered by other players and their reputation as players – rating points and prizes both signify their skill and achievement. They are only willing to pay if they feel the service ensures fair play and desirable prizes.
"Use censorship on the language, sometimes you play with players who absolutely cannot restrain their anger, which doesn't always relate to the game" *"I hardly use GameCorner anymore because the environment is really bad. People are allowed to harass each other. I don't want any part in that. I think it has something to do with age. Many far too young and irresponsible people talk bad to others, which has scared me and others away. If somehow you could introduce age-restrictions or payments or pay more attention to [players'] language…"* *"People are leaving the site because of the foul language from players, and because players wreck the game by delaying time. Also it is impossible to get hold of an administrator"*	*"Administrators have a much higher quality than they did a few years ago… people are treated equally whether they know the administrators or not, you don't often see people muted because administrators' friends say they should, and people being deleted because of trifling matters or misunderstandings"* *"[It is] unbelievable that VIP members ALWAYS get better cards, unbelievable that only VIP members are able to improve their rating. It seems to me that there is some tinkering going on and I have stopped playing because I feel there is tinkering and have doubts about starting to play again for the same reason. I am NOT a bad loser, but there is something that doesn't make sense and seems fraudulent."*	**Behavior of other players** Socially oriented players expect other players to be respectful and polite; they also see the role of the administrators as that of policing the site and ensuring socially acceptable behaviors. What they see as socially unacceptable behavior causes them to question participation and seems to harm their WtP. Achievement oriented players expect fair and challenging games. They question this fairness if they pay but don't win or if they don't pay and others win. They may also be concerned that administrators are too heavy handed and create unfairness, this may mean they are more aggressive or at least have less expectation of politeness.
		Desired features
"To be able to see when a user has been active on GameCorner, that the guestbook can be used without being VIP and easier access to the guestbook."	*"Let more non-VIP players into the rooms instead of holding far too many places for VIP-users. The more that are able to try and the more often, the more VIP members there will be over time"*	Socially-oriented users emphasize features that facilitate their interaction with others and would like free players to be socially active. Achievement oriented players focus on playing and would like free players to provide more competition.

Social orientation examples	Achievement orientation examples	Summary of findings
		Unappreciated changes
"I think that Game Corner has lost its intimacy and cozy atmosphere as it has been changed"	*"I don't participate anymore because of prizes that are far too small"*	Those who have been part of the community for longest exhibit nostalgia towards "the good old days". For socially oriented players, the atmosphere may have changed as the number of users has increased over time. For achievement oriented players, the small prizes for winning are viewed negatively.

Findings

Social/Achievement orientation and WtP

Table 2 summarizes the key findings in relation to social and achievement orientations. Differences were observed in the perceptions of achievement-oriented and socially-oriented players' desired features, and which changes were of concern. E.g., the failure to control other users' language and suspicions about game mechanics are cited as reasons not to pay by socially-oriented and achievement-oriented players, respectively. Both are concerned with playing, winning and making friends, but their attitudes to paying for the ability to do so differ. And their perspectives on the user community sometimes seem at odds.

Freemium and WtP

GameCorner users have established powerful emotional bonds so that spending time in the online community means more than just passing time. A sample comment is, *"GameCorner has helped to give my life meaning again – so a big thank you to all of you".* Yet this affection does not always translate into WtP. GameSoft's attempts at monetization have included raising prices and are cited by users as reasons why they feel alienated and why both free and fee-paying players may have left: *"Lots of people have left the site, possibly because of the increase in prices".*

More than resistance to change or dissatisfaction with rising prices, however, some users simply reject the freemium model as a deception or perversion of principles, *"...it pisses me off that you "offer" VIP membership, that is to split users up into good and less good, if you want to charge money then demand it and stop setting "traps" to make players pay."*

This quote represents the view of those who can accept paying for something they see as valuable, but demand clarity upfront. However, some features are expected to be free and

charging for them conflicts with egalitarian views of online communities (Plant, 2004). The timing of payment—before or after signing up to the site—changes the nature of the experience. Users therefore express concern over commercial motivations intruding into an environment concerned with gaming for fun: *"GameCorner gives the impression of being for fun, but it's really just a sham as the purpose of GameCorner is to get people to sign up for money gaming."*

This reflects the widespread opinion that games should be just for fun and that requiring payment or offering prizes beyond in-game ratings alters the nature of the game. Offering prizes does influence some users to play or encourage them to pay money, but there is also an inherent risk in transforming a social experience into an economic transaction.

Service and Community

An added danger of requesting payment is that expectations about service quality are raised. In particular, GameCorner players react negatively to any modifications to the user interface. This raises issues when efforts to increase revenue take place at the same time as what users perceive to be a reduction in quality.

Users attribute positive actions to the administrators, i.e. to other community members. Any action by the service provider is perceived as neutral at best and more likely negative. For most users, the administrators are the visible face of the online game, while GameSoft is the back-office, whose existence only becomes apparent when things do not go well.

Hypothesis development

In line with the abductive approach (Dubois and Gadde, 2002), we use the qualitative findings to guide hypothesis development. Analysis of the GameCorner community suggests that users

value ease of access and use, with the absence of these characteristics cited as a reason for leaving or refusing to pay.

Allen and Ng (1999) argue that users evaluate functionality rationally based on tangible attributes. Satisfaction with tangible attributes can lead to intent to repurchase or recommend a product. Oestreicher-Singer and Zalmanson (2013) describe this as a techno-centric perspective, whereby it is assumed that the performance of the technology is what people are willing to pay for. This leads to the hypothesis that customers' perception of online game performance will be related with their WtP.

H1. Players' perception of online game performance is positively related with their willingness to pay for the online game.

Ravald and Grönroos (1996) argue that increasing benefits for customers entails adding something to the core product that customers perceive as important. The sense of belonging to a community is one such augmentation. Indeed, GameCorner users appear to distinguish between the contributions of the service provider and the members of the community. It has been noted that customers often contribute more value than service providers in social network based services such as YouTube (Kuppelwieser et al., 2013). Oestricher-Saltman and Zalmanson (2013) describe community members' transition from readers to leaders on a music site, where community, as opposed to content, drives WtP. Thus, service providers are advised to focus on social interactions, which can be more effective than providing additional features and content when it comes to converting free users to fee paying ones (Piskorski 2011). Vock, et al. (2013) find similar evidence by measuring the *entitativity*, or cohesiveness, of a community as a single entity along with social capital among its members. Their results suggest that the key to overcoming the monetization challenge is to increase the strength of the customer community by

enabling more social interaction. An increased sense of community should entail more homogenous behaviours. It should also mean that members seek to protect the survival of the community (Muniz and O'Guinn, 2001), and in a commercial context this may mean contributing to its upkeep by paying. We thus hypothesize that there will be a positive relationship between a sense of community and WtP.

H2. Players' perception of belonging to a community of online game players is positively related with their willingness to pay for the online game.

For many community members, however, increased loyalty to the community and WtP may not be related. They may continue to use online services but have no intention to pay for the privilege. Furthermore, Punj (2015) identifies that those who are most able are not necessarily those most willing to pay for online services, which implies that community members and their motivations must be better understood.

With a few exceptions (e.g., Roberts et al., 2014) marketing researchers have examined online communities as groups of heterogeneous individuals, in line with the brand community concept. A more nuanced view, however, is evident from the information systems literature and particularly examinations of social gaming motivation. Online game players are typically categorized in one of two ways (Manero et al. 2016), according to the types of games they play or according to their style of play, or motivations. A commonly used taxonomy of player motivations uses social and achievement dimensions to classify different types of game players (Bartle, 1996, 2003). The more achievement-oriented are likely to be concerned with winning the game and may even behave aggressively towards others. Socially-oriented players are at least partly motivated by the desire to explore and engage in positive social interactions. Prior research suggests aggressive or achievement-oriented players have higher WtP (Tseng, 2011).

Meanwhile studies of movie and music downloaders suggest those who spend longer in online communities have less WtP (Redondo and Charron, 2013). In the context of a game's community, achievement-oriented players may be more concerned with novelty since they seek new challenges (Huang et al., 2017). Socially-oriented players, on the other hand, may be more concerned with maintaining the *status quo* and hence be less open to changes. This might explain socially-oriented GameCorner users' negative comments about software updates.

A focus on social features may be wise but does not account for the more utilitarian goals of some customers. Both achievement-oriented and socially-oriented players seek out like-minded people in communities. Nevertheless, we posit that socially-oriented players will have lower WtP than achievement-oriented players. The final set of hypotheses is, therefore:

H3. Players' achievement orientation positively moderates the relationship between their perception of belonging to a community of online game players and their willingness to pay for the online game.

H4. Players' social orientation negatively moderates the relationship between their perception of belonging to a community of online game players and their willingness to pay for the online game.

Study 2: The effect of community and user orientation on WtP

Quantitative research methodology

Data were collected using two separate surveys of GameCorner players. The surveys were conducted a few months apart to reduce the risk of common method bias and survey fatigue. The surveys were implemented in SurveyGizmo and broadcast to all GameCorner players. Response rates were 16% and 3% of active users, respectively. Perceived service performance and community strength were measured in the first survey, while WtP and achievement/social orientation in the second. Players' unique usernames were used to match responses between the two surveys. A total of 114 matched pairs of responses were used to test the hypotheses using hierarchical regression analysis.

The dependent variable measuring WtP was made up of three items that measured respondents' WtP for increased opportunities to express themselves and communicate with other users, WtP for participating in games for prizes and WtP for participation in group games where real money could be won. These items all loaded on one variable with a Cronbach's alpha of 0.84, which indicates good reliability.

The independent variable measuring service performance was made up of three questions adapted from Éthier et al.'s (2006) variable for cognitive appraisal. These questions assess whether respondents feel GameCorner helps them to achieve what they needed to achieve, delivered exactly the service they were looking for and did what they expected it to do. The Cronbach's alpha for these items was 0.89, indicating good reliability.

We developed a scale to measure the perceived strength of community membership based on Muniz and O'Guinn's (2001) characteristics of communities. Six items were used to assess

consciousness of kind, shared traditions and moral responsibility, with a Cronbach's alpha of 0.88 indicating good reliability.

In line with Bartle's (2003) taxonomy of gamer motivations, we asked respondents to indicate their agreement with the statements that the best thing about GameCorner is the ability to play games with other people (indicating social orientation) or to win games (suggesting achievement orientation).

The variables and items are summarized in Table 3 and summary statistics are listed in Table 4. Survey items were written in English, translated into Danish and then independently translated back into English to ensure accuracy.

Table 3: Variables and survey items. The survey was conducted in Danish.

Variables and items	**Cronbach's alphas**
WtP	0.84
I would be willing to pay more if I had more opportunity to express myself and communicate with other players.	
I would be willing to pay for participating in games where I had the opportunity to win bigger prizes.	
I would be willing to pay for participating in games with other users if I could win real money.	
Service performance	0.89
The service provided by GameCorner helps me to achieve what I need to achieve.	
GameCorner provides exactly the service I am looking for.	
The service provided by GameCorner does what I expect it to do.	
Strength of community	0.88
GameCorner helps me to feel connected to other GameCorner users.	
I have a sense of belonging to a community of GameCorner users.	
Members of the GameCorner community have a responsibility to help other members.	
I always try to greet other members of the GameCorner community when I meet them online.	
I have a lot in common with other members of the GameCorner community.	
I do not like to see people leave the GameCorner community.	
Social orientation	
The best thing about GameCorner is that I can play with other people.	
Achievement orientation	
The best thing about GameCorner is that I can win in games against other players.	

Quantitative research findings

The pairwise correlations between the variables and summary statistics are shown in Table 4. We see a substantial correlation between service performance and strength of community, which indicates that perceptions of the two tend to be similar. We also see a substantial correlation between social orientation and achievement orientation, which indicates that some people exhibit both orientations. A Harman's single-factor test was conducted as a test of common method bias and resulted in the expected factors without cross-loadings, which indicates that common method bias was not likely a problem.

Table 4: Summary statistics and pairwise correlations between variables. All variables ranged from 1 to 5.

		mean	std.dev.	1	2	3	4
1	WtP	1.51	0.77				
2	service performance	3.18	1.06	-0.02			
3	strength of community	2.88	0.99	0.21	0.44		
4	social orientation	4.57	0.90	-0.25	0.13	0.10	
5	achievement orientation	3.94	1.17	0.00	0.14	0.08	0.39

Hierarchical regression analysis was conducted to test the hypotheses. First, only the independent variables were included in an ordinary least squares regression, then the moderating variable was added, and finally the hypothesized interactions. The results are shown in Table 5. To check for multicollinearity, the variance inflation factors were examined, and all found to be well under the conservative cut-off of 5 (Marquaridt, 1970).

From Table 5, we see that hypothesis 2 about the relationship between the perceived strength of the community and WtP is supported. Thus, we can conclude that the stronger an individual's sense of belonging to an online game community, the more willing this individual is likely to be to pay for the online game. Conversely, hypothesis 1 about the relationship between service

performance and WtP is not supported by the data. This suggests that even if the service provider performs well technically, users are not more likely to be willing to pay, and likewise, even if performance is poor, their WtP will not be swayed.

Table 5: Results of hierarchical regression analysis for WtP (dependent variable). N=114.

	Step 1: Independent variables only	Step 2: Moderator variables added	Step 3: Interactions added
service performance	-0.10	-0.09	-0.10
strength of community	0.20***	0.21***	0.20**
social orientation		-0.33***	-0.24**
achievement orientation		0.11	0.00
achievement orientation X service performance			-0.06
social orientation X service performance			0.14
achievement orientation X strength of community			0.28**
social orientation X strength of community			-0.50***
Model metrics			
F	3.60**	4.35***	3.68***
R^2	0.06	0.14	0.22
Change in R^2		0.08**	0.08**

When the moderating variables are added (step 2 in Table 5), we note a statistically significant negative relationship between the moderating variable for social orientation and WtP. Thus, it appears that socially-oriented users are not inclined to be willing to pay. The coefficient for achievement orientation is not statistically significant.

Hypothesis 3 about the interaction between achievement orientation and strength of community is supported by the data and the interaction diagram (Aiken and West, 1991) is shown in Figure 2. Simple slope analysis reveals that for values of achievement orientation ranging from the mean and up, the relationship between perceived community strength and WtP is positive and statistically significant. For one standard deviation below the mean, the slope is not statistically

significant. This indicates that achievement orientation reinforces the positive contribution of perceived strength of community to WtP.

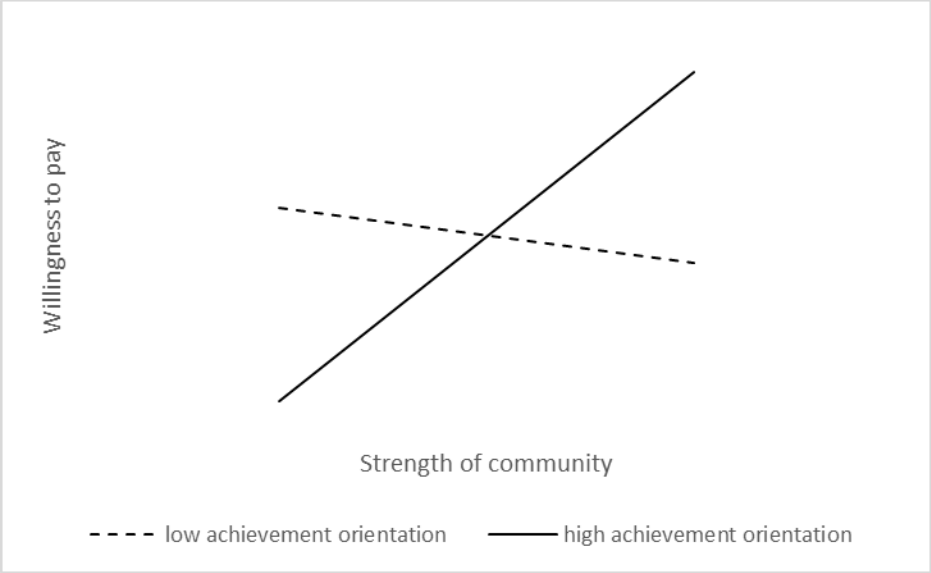

Figure 2: Interaction diagram showing the relationship between perceived strength of community and WtP for values of achievement orientation one standard deviation below the mean and one standard deviation above the mean.

Hypothesis 4 about the interaction between social orientation and strength of community is likewise supported and the interaction diagram is shown in Figure 3. Simple slope analysis reveals that for values of social orientation ranging from one standard deviation below the mean to the mean, the relationship between perceived community strength and WtP is positive and statistically significant. For one standard deviation above the mean, the slope is not statistically significant. This indicates that social orientation cancels out the positive contribution of perceived strength of community to WtP.

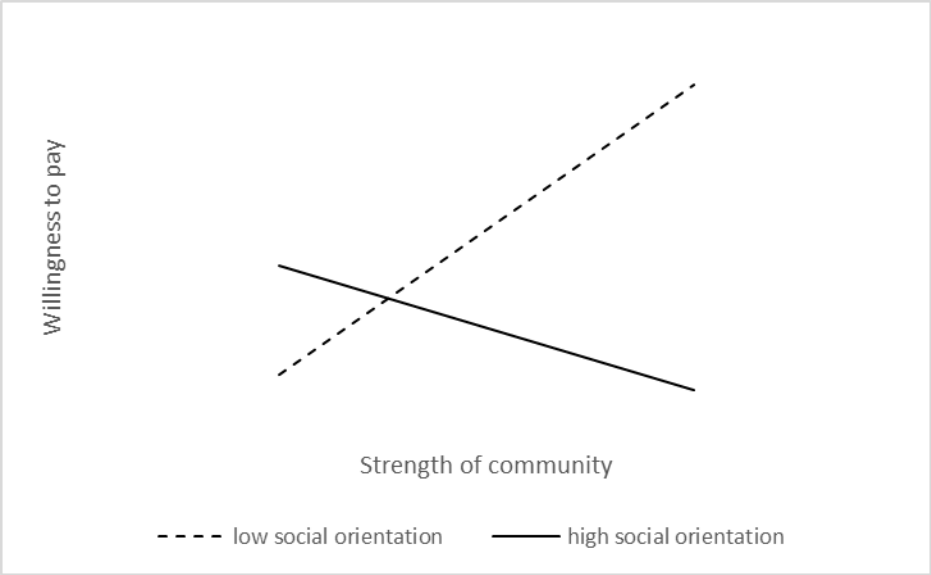

Figure 3: Interaction diagram showing the relationship between perceived strength of community and WtP for values of social orientation one standard deviation below the mean and one standard deviation above the mean.

Discussion

As social network services have increased in scale and scope, the freemium business model has become widely utilized. This business model is attractive because it enables users to try a service out before making a decision about paying. While its appeal is clear, the realities of the monetization challenge are urgent. Prior research has identified the twin challenges of encouraging loyalty in terms of willingness to *play* (Huang et al., 2017) and willingness to *pay* (Redondo and Charron, 2013).

A number of important contributions emerge from the findings of this research. Firstly, the moderating role of player orientation, which indicates that a strong sense of community may not result in WtP. Secondly, we establish that the online game community may be more important than service performance when it comes to value (co)creation. And thirdly, that there is a distinction between community membership and social orientation, so that achievement-oriented

users are not simply anti-social, but rather represent users with a high degree of reciprocal expectations. As a result, community is important for all types of users, but a distinction between user orientations may explain what role it plays for them.

While the role of community has been widely recognized and is typically viewed as positively related to WtP (Muniz and O'Guinn, 2001; Algesheimer et al., 2010), our findings offer a more nuanced perspective. In line with Oestreicher-Singer and Zalmanson (2013) and Candi et al. (2018) our overall findings suggest that as individuals become more connected to a community, their WtP increases. Meanwhile, qualitative analysis reveals a separation between socially-oriented and achievement-oriented users, adding empirical evidence to support Bartle's (1996) observations in early online communities. Our novel contribution is to demonstrate a moderating effect of these orientations on the relationship between perceived community strength and WtP. While achievement-oriented users may be more inclined to pay if they feel a stronger connection with the community, for socially-oriented users, an inherent reluctance to pay may be unaffected by a stronger connection with the community.

These results may seem counter-intuitive but can be explained with reference to the findings related to service performance, community and WtP. The value of the service is largely determined by the friendships and rivalries between players, so that community is important for both socially-oriented and achievement-oriented players. In contrast, we find that the actions of the service provider, measured through an assessment of service performance, are not related to WtP. The net result may be users who are loyal to the community but dissatisfied with the service provider. This is problematic, since it places the drivers of loyalty and WtP increasingly outside of service providers' direct control and highlights the expectation that service providers respond to the shift of power towards customers that the internet has created. Service providers

offer a platform for user communities to form, but often the value comes more from the community itself than the service provider's efforts (Kuppelwieser et al., 2013; Candi et al., 2018).

One of the main contributions of this research is to bring issues relevant in online game contexts into the discussion of value co-creation and brand communities. The achievement and social orientations that apply in game contexts may be related to hedonic and utilitarian goals in other social network services contexts. As such, the expectation would be that communities help to increase the likelihood that customers will choose to pay, provided they seek some form of utilitarian benefit. The results of our research suggest those most likely to pay are those who feel both a strong bond with a community of other users and also seek goals such as having the highest number of views. In such an instance a large number of free users contribute by viewing and commenting, but decision makers should be aware that the majority of these users are unlikely to ever convert into paying customers.

An important finding, which has particular managerial relevance, is that all players need not be payers for a service to be sustainable. Indeed, researchers have begun to recognize the importance of non-monetary contributions (Anderl et al., 2016). Our findings indicate that socially-oriented players may contribute only in non-monetary forms and attempts to persuade them to pay could have negative consequences. Our analysis of achievement-oriented users supports Tseng's (2011) findings that more aggressive and hence more achievement-oriented players are those more likely to part with money. However, the findings show that community is important for achievement-oriented users and their WtP. This can be related to the idea of self-image enhancement in social exchange theory (Nambisan and Baron, 2010). Users want to be part of a community for reciprocal benefits, rather than only due to moral obligations (Muniz and

O'Guinn, 2001). For example, the achievement of winning games is less meaningful if the user is not part of a community that will recognize the achievement, while games are less fun if there are fewer rivals to compete with. Community may affect socially-oriented and achievement-oriented players in different ways but having both appears to enrich the experience for online game players as a whole.

For decision makers, the freemium business model holds considerable appeal, but low conversion rates are the norm (Lovell, 2011). The results of this research suggest two key recommendations for decision makers, namely establishing a strong sense of community among users, and devising different strategies for achievement and socially-oriented users. Decision makers need to understand and accept that not all users are willing to pay but may still help to create value through non-monetary contributions to the community. Indeed, users may be more important than the service provider. Moreover, attempts to encourage payment may prove to be counterproductive if they drive some customers away or create a negative atmosphere in the user community. Distinguishing between social and achievement-oriented users helps in targeting incentives correctly. This may encourage some social users to pay but should be mainly focused at helping achievement-oriented users to get what motivates them in exchange for payments.

Limitations and further research

We use an abductive approach to develop and test hypotheses, applying both qualitative and quantitative methods to derive findings and enable triangulation. A limitation of this approach, however, is that the focus on a single context limits the potential to generalize findings. Case research relies on theoretical rather than statistical generalization. This means the same results may not apply in other contexts, but the explanations should, insofar as other online games and their users share similar characteristics, similar outcomes could be expected. Nevertheless,

further research is required to examine the extent to which the WtP behaviour observed applies in other contexts. Additionally, further research should seek to identify users that are willing to make either monetary or non-monetary contributions so appropriate interactions with them can be managed. Otherwise, our results suggest that service providers risk losing users who contribute to the health and growth of the community but are not inclined to pay for access. This may entail social network analysis to identify well connected users, who contribute through their interactions or by providing content that others will pay for access to. Finally, an important challenge is selecting appropriate features for different categories of users. Restricting access to both social and achievement related features may be counter-productive if those who would use certain features are less willing to pay for them. A useful avenue for further study, therefore, would be to examine whether bundles of separate features could reduce friction.

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